

25X1

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SECRET

VACUUM TUBE GLASS USED IN THE USSR - 1945-50

Type of Glass	Maker	Chemical Composition									
		SiO ₂	B ₂ O ₃	Al ₂ O ₃	CaO	MgO	BaO	PbO	ZnO	Na ₂ O	K ₂ O
Lead silicate IB		71.0	-	-	6.3	-	-	5.3	-	10.7	16.7
" " Nr 16		70.0	-	-	3.8	-	-	10.4	-	11.0	4.8
" " VI B		66.0	-	1.0	2.5	-	-	14.5	-	9.0	7.0
" " C - 1	Corning USA	62.0	-	2.0	-	-	-	20.5	-	7.7	6.0
" " 3C-4 (Nr 12)	Nii 160	55.0	-	1.7	0.3	-	-	30.0	-	3.8	9.2
Dolomitglas Nr82		74.0	-	-	5.8	3.6	-	-	-	16.6	-
" Nr71		73.3	-	0.4	5.4	3.9	-	-	-	17.0	-
" G-8	Corning USA	70.8	-	1.6	5.5	3.8	-	-	-	16.2	0.7
Baritglas 6A 1		69.4	-	-	5.5	3.5	5.0	-	-	12.5	4.1
" Nr 112		71.5	-	-	4.5	1.5	7.0	-	-	10.0	5.5
" Nr 23		68.4	2.7	3.9	8.5	-	-	-	-	9.4	7.1
" Nr 23	Nii 160	68.39	3.66	3.89	8.5	-	-	-	-	9.42	7.14
Molybdaenglas Nr 46		68.0	17.5	3.0	-	-	-	-	5.0	6.5	-
" Nr 46	Nii 160	66.75	20.25	3.5	-	-	-	-	-	3.9	5.35
" G-705 A3	Corning USA	67.0	22.0	2.0	-	-	-	-	-	6.5	-
" 3C-5		68.0	20.0	3.0	-	-	-	-	-	4.0	5.0
" N4 35		63.0	24.9	1.5	-	-	-	-	-	9.1	1.5
Nonex	Corning USA	73.0	16.5	-	-	-	-	6.0	-	4.5	-
Pyrex	Corning USA	80.8	12.0	2.2	0.3	-	-	-	-	4.1	0.1

ENCLOSURE (A)

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Type of Glass	Purpose	Physical Properties			
		Temp. Strain Point $\eta = 25 \cdot 10^{13}$	Annealing Point $\eta = 10^9$	Co-efficient of Expansion $\alpha \cdot 10^7$	
I B	Rx and Tx valves		510-530	87-90	25-100°C
Nr 16	Tubes, rods, lamp pinches	460	490-510	67-90	25-100°C
IV B	Tubes, pinches/bases for Rx valves	450	480-500	87-90	25-100°C
G.1	" "	425		92	25-325°C
3 C-4	" "	425	475-490	85-89	0-310°C
Nr 82	Lamp and Rx valve envelopes	500	520-550	88-92	25-100°C
Nr 71	" "	500	510-530	87-90	25-100°C
6A1	Glass tube for but- ton bases, lamps and small valves		510-540	86-90	25-100°C
Nr 112	" "		510-550	87-90	25-100°C
Nr 23	Envelopes and tubes for Tx, X-ray and other larger valves	530	570-590	84-87	25-100°C
Nr 46	" "	550	580-600	46-48	25-100°C
3 C - 5	" "	515	560-570	48-50	25-100°C
Nr 35	" "		560-580	52-56	25-100°C
702 P	" "	520	580	36	25-325°C
Pyrex	Kinoscopes	560	620	33	25-325°C

ENCLOSURE (B)

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